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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/688,557
Filing Date: October 16, 2000
Appellant(s): HUDSON, JOHN E.

MAILED

APR 05 2006

Technology Center 2600

William Lee
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 15, 2005 appealing from the Office action mailed December 07, 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5793744	Kanerva	07-1996
6078817	Rahman	04-1997
7006485	Bi	11-2001

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6009124	Smith et al.	09-1997
6449290	Willars et al.	06-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 5–14 are rejected under 35 USC 103(a) as being unpatentable over Kanerva et al (U.S. Patent No. 5,793,744) in view of Rahman (U.S. Patent No. 6,078,817).

Referring to claim 1, Kanerva et al teaches a wireless communications system comprising a terminal capable of communicating with a plurality of simultaneous communications links (Column 3, Lines 5-8, 61-62; Column 5 Lines 18-24, Column 6, Lines 10-12 and Figure 6), a number of the plurality of simultaneous communications links bearing content data (Column 3, Lines 46-47), wherein the content data borne by each of the number of the plurality of simultaneous communications links are non-identical (Column 3, Lines 5-8), but does not teach communicating with a plurality of base stations. Rahman teaches communicating with a plurality of base stations (Column 4, Lines 61-64 and Figure 3). Therefore, at the time the

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invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al with the teaching of Rahman of communicating with a plurality of base stations to provide increased capacity (Column 3, Lines 14-15).

Referring to claim 5, Kanerva et al further teaches wherein at least two of the communications links are completely isolated from each other (Figure 6 and Column 10, Lines 54-58).

Referring to claim 6, Kanerva et al further teaches a routing entity capable of dividing the content data between the number of the plurality of communications links so that a proportion of the content data is communicated over a communications link of the number of the plurality of communications links and another proportion of the data is simultaneously communicated over another communications link of the number of the plurality of communications links (Column 3, Lines 5-8 and Figure 6; 61).

Referring to claim 7, Kanerva et al further teaches wherein a source of the content data comprises the routing entity (Column 3, Lines 5-8 and Figure 6; 61).

Referring to claim 8, Kanerva et al further teaches wherein the routing entity is arranged to control routing of virtual circuits so as to cause the proportion of the data to be communicated over the communications link of the number of the plurality of the communications links (Column 3, Lines 5-8 and Figure 6; 61).

Referring to claim 9, Kanerva et al further teaches a controller unit, the controller unit comprising the routing entity (Figure 6; 61).

Referring to claim 10, Kanerva et al further teaches wherein the routing entity is arranged to edit headers of data units to contain an address corresponding to the communications link of the number of the plurality of the communications links (Column 7, Lines 31-32 and Figure 6 i.e. $Ch_1 - Ch_n$).

Referring to claim 11, Kanerva et al further teaches wherein the routing entity is arranged to edit headers of data units to contain an address corresponding to the communications link of the number of the plurality of the communications links (Column 7, Lines 31-32 and Figure 6 i.e. $Ch_1 - Ch_n$).

Referring to claim 12, Kanerva et al further teaches wherein the routing entity is arranged to edit path identifiers of data units so that the proportion of the data is communicated over the communications link of the number of the plurality of communications links (Column 3, Lines 5-8 and Figure 6).

Referring to claim 13, Kanerva et al further teaches further comprising a controller unit, the controller unit being arranged to select the number of the plurality of communications links

from the plurality of communications links in response to respective signal quality criteria of the plurality of communications links (Column 10, Lines 32-33).

Referring to claim 14, Kanerva et al further teaches wherein the controller is arranged to select the number of the plurality of communications links from the plurality of communications links in response to respective bandwidth availability of the plurality of communications links (Column 9, Lines 42-54).

2. Claims 2-3 are rejected under 35 USC 103(a) as being unpatentable over Kanerva et al and Rahman and further in view of Bi et al (US Patent Pub No. 2002/0036999).

Referring to claim 2, Kanerva et al and Rahman teach the limitations of claim 2, but do not teach wherein at least one of the plurality of base stations supports a plurality of sectors. Bi et al teaches wherein at least one of the plurality of base stations supports a plurality of sectors (0018). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Kanerva et al and Rahman with the teaching of Bi et al wherein at least one of the plurality of base stations supports a plurality of sectors to provide a smooth transition between service areas (0003).

Referring to claim 3 Bi et al further teaches wherein at least one of the plurality of base stations comprises a sectored antenna (0018)

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3. Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Kanerva et al and Rahman and further in view of Smith et al (U.S. Patent No. 6,009,124).

Referring to claim 4, Kanerva et al and Rahman teach the limitations of claim 4, but do not teach wherein the terminal comprises an antenna arrangement arranged to direct a sector or beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations. Smith et al teaches wherein the terminal comprises an antenna arrangement arranged to direct a sector or beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations (Column 1, Lines 18-23). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al and Rahman with the teaching of Smith et al wherein the terminal comprises an antenna arrangement arranged to direct a sector or beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations to steer the adapted sectorized antenna to hone in on the intended signal (Column 1, Lines 21-23).

4. Claim 15 is rejected under 35 USC 103(a) as being unpatentable over Kanerva et al and further in view of Willars et al (U.S. Patent No. 6,449,290).

Referring to claim 15, Kanerva et al teaches a communications terminal coupled to an antenna arrangement (Figure 6), the antenna arrangement supporting a plurality of simultaneous communications links (Column 3, Lines 5-8, 61-62; Column 5 Lines 18-24, Column 6, Lines 10-

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12 and Figure 6), a number of the plurality of simultaneous communications links bearing content data (Column 3, Lines 46-47), wherein the content data born by each of the number of the plurality of simultaneous communications links are non-identical (Column 3, Lines 5-8), but does not teach a plurality of modems. Willars et al teaches a plurality of modems (Figure 1; base station). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al with the teaching of Willars et al of using a plurality of modems to facilitate communication (Column 2, Lines 6-7). Examiner uses the Willars reference to show the use of a plurality of modems in a connection is known to one of ordinary skill in the art.

5. Claim 16 is rejected under 35 USC 103(a) as being unpatentable over Kanerva et al and Willars et al and further in view of Smith et al.

Referring to claim 16, Kanerva et al and Willars et al teach the limitations of claim 16, but do not teach wherein the terminal comprises a sectored multiple beam antenna arranged to direct an antenna beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations. Smith et al teaches wherein the terminal comprises a sectored multiple beam antenna arranged to direct an antenna beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations (Column 1, Lines 18-23). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al and Willars et al with the teaching of Smith et al wherein the terminal comprises a

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sectorized multiple beam antenna arranged to direct an antenna beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations to steer the adapted sectorized antenna to hone in on the intended signal (Column 1, Lines 21-23).

6. Claims 17, 19-25, 27-33, 35-41 and 43-48 are rejected under 35 USC 103(a) as being unpatentable over Kanerva et al in view of Rahman.

Referring to claim 17, Kanerva et al teaches a method of communicating data between a base stations and a terminal, the method comprising the step of: establishing a plurality of respective simultaneous communications links between the base station and the terminal (Column 3, Lines 5-8, 61-62; Column 5 Lines 18-24, Column 6, Lines 10-12 and Figure 6), a number of the plurality of simultaneous communications links bearing content data (Column 3, Lines 46-47), wherein the content data born by each of the number of the plurality of simultaneous communications links are non-identical (Column 3, Lines 5-8), but does not teach communicating with a plurality of base stations. Rahman teaches communicating with a plurality of base stations (Column 4, Lines 61-64 and Figure 3). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al with the teaching of Rahman of communicating with a plurality of base stations to provide increased capacity (Column 3, Lines 14-15).

Referring to claim 25, Kanerva et al teaches computer executable software code stored on a computer readable medium, the code being for communicating data between a base station and a terminal (Figure 6; 61), the code comprising: code to establish a plurality of simultaneous communications links between a base station and the terminal (Column 3, Lines 5-8, 61-62; Column 5 Lines 18-24, Column 6, Lines 10-12 and Figure 6), a number of the plurality of simultaneous communications links bearing content data (Column 3, Lines 46-47), wherein the content data born by each of the number of the plurality of simultaneous communications links is non-identical (Column 3, Lines 5-8), but does not teach communicating with a plurality of base stations. Bi et al teaches communicating with a plurality of base stations [0003]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al with the teaching of Bi et al of communicating with a plurality of base stations to provide a smooth transition at handoff [0003].

Referring to claim 33, Kanerva et al teaches a programmed computer for communicating data between a base station and a terminal (Figure 6), comprising memory having at least one region for storing computer executable program code (Figure 6; 61), and a processor for executing the program code stored in memory (Figure 6; 61), wherein the program code includes: code to establish a plurality of simultaneous communications links between a base station and the terminal (Column 3, Lines 5-8, 61-62; Column 5 Lines 18-24, Column 6, Lines 10-12 and Figure 6), a number of the plurality of simultaneous communications links bearing content data (Column 3, Lines 46-47), wherein the content data born by each of the number of the plurality of simultaneous communications links is non-identical (Column 3, Lines 5-8), but

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does not teach communicating with a plurality of base stations. Rahman teaches communicating with a plurality of base stations (Column 4, Lines 61-64 and Figure 3). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al with the teaching of Rahman of communicating with a plurality of base stations to provide increased capacity (Column 3, Lines 14-15).

Referring to claim 41, Kanerva et al teaches a computer readable medium having computer executable software code stored thereon, the code being for communicating data between at least one base station and a terminal and comprising (Figure 6; 61): code to establish a plurality of simultaneous communications links between a base station and the terminal (Column 3, Lines 5-8, 61-62; Column 5 Lines 18-24, Column 6, Lines 10-12 and Figure 6), a number of the plurality of simultaneous communications links bearing content data (Column 3, Lines 46-47), wherein the content data born by each of the number of the plurality of simultaneous communications links is non-identical (Column 3, Lines 5-8), but does not teach communicating with a plurality of base stations. Rahman teaches communicating with a plurality of base stations (Column 4, Lines 61-64 and Figure 3). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al with the teaching of Rahman of communicating with a plurality of base stations to provide increased capacity (Column 3, Lines 14-15).

Referring to claims 19, 27, 35 and 43 Kanerva et al further teaches the step of: communicating the content data via the number of the plurality of communications links, a

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proportion of the data being communicated over a communications link of the number of the plurality of communications links and another proportion of the data being simultaneously communicated over another communications link of the number of the plurality of communications links (Column 3, Lines 5-8).

Referring to claims 20, 28, 36 and 44 Kanerva et al further teaches 20 wherein a source of the content data controls routing of virtual circuits so as to cause the proportion of the content data to be communicated over the communications link of the number of the plurality of the communications links (Column 3, Lines 5-8).

Referring to claims 21, 29, 37 and 45 Kanerva et al further teaches the step of: editing headers of data units to contain an address corresponding to the communications link of the number of the plurality of the communications links (Column 7, Lines 31-32 and Figure 6 i.e. $Ch_1 - Ch_n$)

Referring to claims 22, 30, 38 and 46 Kanerva et al further teaches the step of: editing path identifiers of data units so that the proportion of the data is communicated over the communications link of the number of the plurality of communications links (Column 3, Lines 5-8 and Figure 6).

Referring to claims 23, 31, 39 and 47 Kanerva et al further teaches the step of: selecting the number of the plurality of communications links from the plurality of communications links

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in response to respective signal quality criteria of the plurality of communications links (Column 10, Lines 32-33).

Referring to claims 24, 32, 40 and 48 Kanerva et al further teaches the step of: selecting the number of the plurality of communications links from the plurality of communications links in response to respective bandwidth availability of the plurality of communications links (Column 9, Lines 42-54).

7. Claims 18, 26, 34, and 42 are rejected under 35 USC 103(a) as being unpatentable over Kanerva et al and Rahman and further in view of Smith et al.

Referring to claim 18, Kanerva et al and Rahman teach the limitations of claim 18, but do not teach the terminal directing a sector or a beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations. Smith et al teaches directing a sector or a beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations (Column 1, Lines 18-23). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al and Rahman with the teaching of Smith et al wherein the terminal directs a sector or a beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations to steer the adapted sectored antenna to hone in on the intended signal (Column 1, Lines 21-23).

Referring to claims 26, 34 and 42, Kanerva et al and Rahman teach the limitations of claim 26, but do not teach wherein the terminal comprises a sectored multiple beam antenna, and the code further comprises: code to direct a sector or a beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations. Smith et al teaches wherein the terminal comprises a sectored multiple beam antenna, and the code further comprises: code to direct a sector or a beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations (Column 1, Lines 18-23). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Kanerva et al and Rahman with the teaching of Smith et al wherein the terminal comprises a sectored multiple beam antenna, and the code further comprises: code to direct a sector or a beam to one of the plurality of base stations for providing a near-isolated communications link to the one of the plurality of base stations to steer the adapted sectored antenna to hone in on the intended signal (Column 1, Lines 21-23).

(10) Response to Argument

Both Kanerva and the Appellant teach that data rates of present-day mobile communication networks are not sufficient for the new, high-speed data services. As a solution, Kanerva proposes distributing the information to be transmitted to the mobile station over multiple channels and sending the data by a single base station. The Appellant's solution proposes distributing the information to be transmitted to the mobile station over multiple channels and sending the data with a plurality of base stations. The Examiner has used the

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Rahman reference to provide evidence of the well-known “soft handoff” technique to show the mobile station communicating simultaneously with a plurality of base stations. Appellant argues that Rahman teaches away from macro-diversity, the Examiner disagrees. Rahman discusses a method for increasing the capacity of a fully loaded macro-diversity CDMA network (see Column 3, lines 4-32). The section cited by Appellant relates to prior art macro-diversity systems, while Rahman improves on the prior art systems. Regarding the argument about no suggestion to combine, Examiner believes it is an obvious modification to alter the art of Kanerva et al. of communicating with a mobile station using multiple links from a single base station with the art of Rahman of communicating with the mobile station using multiple links from multiple base stations as both Kanerva and Rahman provide a method of increasing the capacity of CDMA mobile communication systems and both discuss using multiple simultaneous communication links from base station(s) to the mobile station.

Regarding Applicant’s argument that Willars teaches the provision of a plurality of modems in a base station vs. a mobile station. The Rahman reference deals with diversity from the mobile’s perspective and the teaching of Willars is used to show the concept of using a plurality of modems for multiple connections which could be applied equally well to either the mobile station or the base station, as the use of modems in both mobile and base stations is known to one of ordinary skill in the art,

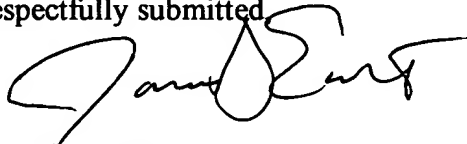
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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



James D. Ewart

Conferees:



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